

Notice of Allowability

Application No.

10/738,389

Examiner

Jesse Diller

Applicant(s)

DETAR ET AL.

Art Unit

2187

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the TD, IDS filed 04/25/2006.
2. ☒ The allowed claim(s) is/are 1-20.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|--|--|
| 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input checked="" type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date <u>20060418</u> . |
| 3. <input checked="" type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date <u>12/17/03, 04/25/06</u> | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____. |

DETAILED ACTION

Information Disclosure Statement

1. The Information Disclosure Statements filed 12/17/2003 and 04/25/2006 have been considered by the Examiner. Items that have been marked through were not considered because the listing is invalid. It is noted that the items marked through on the IDS of 12/17/2003 were corrected on the IDS of 04/25/2006.

Reasons for Allowance

The following is an examiner's statement of reasons for allowance:

2. **There is an obviousness-type double patenting** issue between at least claims 1 of applications 10/738,389 and 10/738,946, each of which are commonly assigned and have common inventive entities. However, Applicants have filed on 04/25/2006, in each application, a terminal disclaimer disclaiming the other corresponding application. Therefore, the double patenting issue is moot.

3. **The prior art (outside of the double patenting art discussed above) fails to show the limitations of at least the independent claims. The closest prior art will be discussed hereinbelow.**

4. The independent claims include terms such as "virtual track table (VTT)" and "track number table (TNT)" which are references to the system described in US Patent **6,038,639 to O'Brian et al.**, O'Brian being one of the inventors of the instant application. As discussed from Page 2, line 18 to Page 9, line 2 of the instant application, the instant application is an apparatus and method to resolve problems in the system of the '639 patent. The prior art (except for Milillo, discussed below) does

Art Unit: 2187

not show reference count regeneration or the circuitry therefore as an improvement on the '639 patent.

5. **Milillo et al., US 6,421,767**, teaches a system and method for reference count regeneration in the system of O'Brian ('639). However, as discussed in Page 6, lines 17-21 of the instant application, Milillo teaches reading the VTT entries, completely regenerating the reference counts, and merging the result into the TNT. Milillo does not teach sorting to VTT to generate a reference list, then generating a reference count list, and merging the reference count list as required for the instant application.

6. **Selkirk et al., US 6,779,094 and Milligan, US 20030221076 A1**, both discuss the general system of the instant application, including reference counts, TNT, and VTT. However, Selkirk and Milligan do not discuss reference count regeneration.

7. **Chan et al., US 4,400,770** teaches a system and method for detecting 'synonyms' in a cache, which comprises searching the cache directory for virtual addresses which address the same physical address.

8. **Robinson, US 5,043,885**, discloses a system of reference count tracking in a cache, but does not discuss regeneration as disclosed in the instant claims.

9. **Thatte et al., US 4695949 A**, discloses a system using reference counts, and discusses the problems of the complexity of reference counting, but does not discuss regeneration as disclosed in the instant claims, or in the context of a system using the VTT/TNT record-keeping system of the instant application.

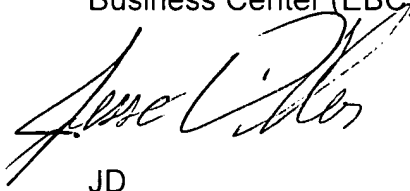
10. **Therefore, the instant application is seen to be patentable over the prior art of record.**

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jesse Diller whose telephone number is (571) 272-4173. The examiner can normally be reached on 8:30AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Donald Sparks can be reached on (571) 272-4201. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



JD



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